

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference PT11791 WO	FOR FURTHER ACTION <small>see Form PCT/ISA/220 as well as, where applicable, item 5 below.</small>	
International application No. PCT/EP2005/050198	International filing date (day/month/year) 19/01/2005	(Earliest) Priority Date (day/month/year) 30/01/2004
Applicant VOITH FABRICS PATENT GMBH		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 9 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☒ **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 1

☐ as suggested by the applicant.

☒ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

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Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

A system for drying a tissue or hygiene web includes a permeable structured fabric (4) carrying the web (W) over a drying apparatus (9). A permeable dewatering fabric (7) contacts the web and is guided over the drying apparatus. A mechanism is used to apply pressure to the permeable structured fabric, the web, and the permeable dewatering fabric at the drying apparatus.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-55,59-77,121,137-145

apparatus and method for drying a web by pressing the web between two fabrics

2. claim: 56

method for connecting an anti-rewet layer to a base fabric layer of a permeable dewatering fabric including melting a thin elastomeric cast permeable membrane into the base fabric layer

3. claims: 57-58

method for connecting an anti-rewet layer to a base fabric of a permeable dewatering fabric comprising needling with each other thin layers of batt fibers disposed on the face and back sides of the base fabric layer.

4. claims: 78-120, 122-136

belt press for a paper machine and press belt

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 D21F11/00 D21F3/02 D21F7/08 D21F1/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 D21F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ✓ A	<p>WO 03/062528 A (VOITH PAPER PATENT GMBH; HERMAN, JEFFREY; BECK, DAVID, A; SCHERB, THOM) 31 July 2003 (2003-07-31) cited in the application</p> <p>page 6, paragraph 3 - page 17, paragraph 4 page 23, paragraph 3 - page 31, paragraph 3 figures 1,3,5,6</p> <p>----- -/--</p>	<p>1-7, 17-20, 26,35, 38, 40-42, 49, 51-55, 62-65, 73-77, 121, 137-142</p> <p>78,98, 99,122</p>

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

° Special categories of cited documents :

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

18 May 2005

Date of mailing of the international search report

22. 06. 2005

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International Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ✓ A	US 5 701 682 A (CHUANG ET AL) 30 December 1997 (1997-12-30) column 4, line 32 - column 12, line 14 figure 1	1-3,5-7, 20,26, 31,32, 35,38, 42,51, 55, 59-69, 73,77, 121, 137-143 78,98, 99,122
X ✓ A	US 2003/033727 A1 (STELLJES MICHAEL GOMER ET AL) 20 February 2003 (2003-02-20) paragraph '0033! - paragraph '0087! figures 2-4	1-3,5-7, 16-20, 22-28, 35-38, 62-64, 73,74, 77,121, 137,142 78,98, 99,122
X ✓ A	US 2003/056925 A1 (BECK DAVID A) 27 March 2003 (2003-03-27) paragraph '0021! - paragraph '0035! figures 1,6	1-7, 17-20, 26,32, 38,42, 51,55, 59-61, 65,69, 73,74, 77,121, 137,142 78,98, 99,122
X ✓ A	US 6 051 105 A (AMPULSKI ET AL) 18 April 2000 (2000-04-18) column 9, line 36 - column 12, line 56 ----- -/--	1-3, 7-10,14, 20,26, 29,30, 32-41, 59-64, 69,72, 73,75,77

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ✓	US 6 149 767 A (HERMANS ET AL) 21 November 2000 (2000-11-21) column 4, line 28 - column 5, line 16 column 9, line 32 - line 56 column 11, line 11 - column 19, line 27 -----	1,4-7, 20,26, 38,73, 74,77, 121,137, 142-144
X ✓	US 6 436 240 B1 (JEFFREY JOHN) 20 August 2002 (2002-08-20) column 1, line 24 - line 60 column 2, line 6 - line 23 -----	56
X ✓	EP 1 293 602 A (ICHIKAWA CO.,LTD) 19 March 2003 (2003-03-19) paragraph '0028! - paragraph '0033! figures 1,2 -----	57
Y		58
X ✓	EP 0 878 579 A (APPLETON MILLS) 18 November 1998 (1998-11-18) page 4, line 15 - page 5, line 13 figure 2 -----	57
Y ✓	US 4 162 190 A (ASHWORTH, GORDON) 24 July 1979 (1979-07-24) column 7, line 14 - line 19 figure 1 -----	58
A ✓	DE 196 27 891 A1 (VOITH SULZER PAPIERMASCHINEN GMBH, 89522 HEIDENHEIM, DE) 15 January 1998 (1998-01-15) column 5, line 67 - column 6, line 29 figure 2 -----	78,98, 99,122
A ✓	EP 0 658 649 A (APPLETON MILLS) 21 June 1995 (1995-06-21) abstract figure 5 -----	99

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Information on patent family members

International Application No

PCT/EP2005/050198

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 03062528	A	31-07-2003	US 2003136018 A1 BR 0302842 A CA 2474489 A1 EP 1478804 A1 WO 03062528 A1	24-07-2003 02-03-2004 31-07-2003 24-11-2004 31-07-2003
US 5701682	A	30-12-1997	US 5598643 A AU 698155 B2 AU 4100096 A AU 712570 B2 AU 6983598 A AU 705638 B2 AU 6983698 A BR 9506569 A CA 2181484 A1 CN 1148886 A ,C DE 69530754 D1 DE 69530754 T2 EP 1300641 A2 EP 1300642 A2 EP 0740765 A1 ID 24738 A ID 27381 A JP 9511568 T WO 9616305 A1 US 5699626 A	04-02-1997 22-10-1998 17-06-1996 11-11-1999 01-10-1998 27-05-1999 01-10-1998 02-09-1997 30-05-1996 30-04-1997 18-06-2003 25-03-2004 09-04-2003 09-04-2003 06-11-1996 05-12-1996 05-12-1996 18-11-1997 30-05-1996 23-12-1997
US 2003033727	A1	20-02-2003	BR 0211955 A CA 2452548 A1 CN 1543523 A EP 1417376 A1 JP 2004538390 T MX PA04001441 A WO 03016619 A1	03-11-2004 27-02-2003 03-11-2004 12-05-2004 24-12-2004 27-05-2004 27-02-2003
US 2003056925	A1	27-03-2003	BR 0212795 A CA 2461918 A1 WO 03029558 A1 EP 1432870 A1 JP 2005504193 T US 2004180596 A1	14-12-2004 10-04-2003 10-04-2003 30-06-2004 10-02-2005 16-09-2004
US 6051105	A	18-04-2000	US 5830316 A AU 7072098 A BR 9809838 A CA 2289780 A1 CN 1262714 A EP 0981664 A1 WO 9851859 A1 JP 2001525893 T	03-11-1998 08-12-1998 02-03-2004 19-11-1998 09-08-2000 01-03-2000 19-11-1998 11-12-2001
US 6149767	A	21-11-2000	AU 739501 B2 AU 1374499 A BR 9815206 A CA 2307205 A1 CN 1282395 A EP 1027498 A1 ID 26871 A	11-10-2001 24-05-1999 27-11-2001 14-05-1999 31-01-2001 16-08-2000 15-02-2001

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Information on patent family members

International Application No

PCT/EP2005/050198

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 6149767	A		JP	2001522003 T	13-11-2001
			TW	440636 B	16-06-2001
			WO	9923303 A1	14-05-1999
			US	6331230 B1	18-12-2001
			ZA	9809272 A	16-04-1999
US 6436240	B1	20-08-2002	AT	217656 T	15-06-2002
			AU	7778198 A	30-12-1998
			CA	2293604 A1	17-12-1998
			DE	69805409 D1	20-06-2002
			DE	69805409 T2	09-01-2003
			EP	0988416 A1	29-03-2000
			ES	2177016 T3	01-12-2002
			WO	9856982 A1	17-12-1998
			TW	486530 B	11-05-2002
EP 1293602	A	19-03-2003	JP	2003089990 A	28-03-2003
			CA	2402661 A1	14-03-2003
			CN	1408949 A	09-04-2003
			EP	1293602 A1	19-03-2003
			US	2003051848 A1	20-03-2003
EP 0878579	A	18-11-1998	US	6140260 A	31-10-2000
			EP	0878579 A2	18-11-1998
US 4162190	A	24-07-1979	NONE		
DE 19627891	A1	15-01-1998	NONE		
EP 0658649	A	21-06-1995	EP	0658649 A1	21-06-1995
			EP	0659934 A2	28-06-1995
			FI	945850 A	15-06-1995